# OURNAL

Vol. 35, No. 8 AUGUST 1956

# SUPPLEMENT

NSTITUTION OF PRODUCTION ENGINEERS, 10, CHESTERFIELD ST., LONDON, W.I

### THE ANNUAL DINNER 1956

The Institution's Annual Dinner, 1956, will be held in the

DORCHESTER HOTEL, LONDON

on

FRIDAY, 5th OCTOBER, 1956

The Principal Guest will be The Rt. Hon. lain Macleod, M.P.,
Minister of Labour and National Service.

Tickets, price £3. 3s. 0d. each (excluding wines) may be ordered on the form printed overleaf. Owing to limited accommodation it is not possible to have lady guests. Tickets are available for members and gentlemen guests. Table places will be allotted in strict order of application for tickets

Please Note:

Last date for applications: Monday, September, 24th. No refunds for calcellations after Monday, October, 1st.

## THE 1956 VISCOUNT NUFFIELD PAPER

Members are asked to note that the 1956 Viscount Nuffield Paper will be presented at the University or Bristol on Wednesday, 17th October, 1956, at 6.p.m. The speaker will be Dr. W. Grey Walter, of the Burden Neurological Institute, Bristol.

Full details of the meeting and an application form for admission tickets and preprints, will appear in the September issue of the Journal Supplement.

### **MEMBERSHIP SUBSCRIPTIONS**

Membership Subscriptions for the current year become due on 1st July, 1956. An invoice has been sent to all members who do not pay by standing banker's order. If you have not already paid, it would be appreciated if you would do so without delay. Please send your subscription together with the invoice direct to the Institution Bankers at the following address: Westminster Bank Limited, Park Lane, London, W.1.

MATERIALS HANDLING CONVENTION (see page 3)



#### THE ANNUAL DINNER 1956

The state of the s		Receipt sent:-
		Ticket(s) sent:-
To: The Secretary, The Institution of 10, Chesterfield Street, London,	W.1.	
Please send me a ticket for mys		whose names are given below:-
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I enclose remittance for £ : (.......ticket(s) at £3. 3s. 0d. each).

FROM (Please use block letters)

(additional names may be entered on separate slip).

N.B.—Cheques, etc. should be crossed and made payable to the Institution of Production Engineers.

If possible, I should like to sit at the same table as, or adjacent to, the following members:-

# 3rd INTERNATIONAL CONGRESS ON HIGH SPEED PHOTOGRAPHY LONDON - 10th-15th SEPTEMBER, 1956

The Third International Congress on High-Speed Photography will be held in London, from the 10th-15th September, 1956. It will be sponsored by the Department of Scientific and Industrial Research, and will take place at Government Offices, Horse Guards Avenue, London, S.W.1. High-speed photography and cinematography are rapidly gaining in importance in the fields of research and technology, where many problems are showing themselves to be most readily tackled by means of these comparatively new techniques. Much progress has been made in the scope of both techniques and applications during the past ten years, and the most recent developments will be discussed and demonstrated.

Conference fee for full participation is £6. 10s. With the Conference will be organised an Exhibition. It is intended to bring together research and commercial exhibits from Universities, Government Research Establishments, firms and Industrial Research Organisations. Films on recent developments in techniques and apparatus will also be shown.

All members of the Institution are welcome to visit this exhibition for which no charge will be made. A ticket of admission is, however, required which can be obtained from the Secretary, D.S.I.R., Charles House, 5-11 Regent Street, London, S.W.1.

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## **BETTER HANDLING-DO IT NOW!**

# MATERIALS HANDLING CONVENTION LEAMINGTON SPA, 27th September - 29th September

The Materials Handling Sub-Committee of the Institution have arranged a 3-day Convention to be

held at Learnington Spa from Thursday, 27th September, to Saturday, 29th September, 1956.

The programme includes visits to manufacturing companies in the Learnington, Coventry and Birmingham areas, who have introduced some significant development in materials handling during the last few years. Delegates have the opportunity of joining parties of between 20 and 30 to visit engineering and non-engineering companies, both large and small, and discussions will take place with the senior officials of these companies at the end of each visit (see details overleaf).

On Thursday evening the Mayor of Learnington will officially welcome delegates at the Town Hall, and will join them for dinner in the Assembly Room. The President of the Institution, Mr. E. W. Hancock, M.B.E., Hon.M.I.Prod.E., Director and General Manager of Humber Ltd., Coventry, will be the principal speaker.

The Paper on Friday afternoon will be presented by Mr. John Bright, of Joseph Lucas, Ltd., Birmingham,

who will speak on:

### "Materials Handling's Thorny Problems"

This will be followed by a discussion on the Paper. There will be a showing of films on materials handling on the same evening.

On Saturday morning there will be a general forum for materials handling problems, when a panel of leading executives from the companies on the visiting list will answer questions.

The Convention will close at 11.30 a.m. on Saturday morning.

Convention Fees: Members £5 5s. Od.; Non-Members £6 6s. Od.

Meetings, luncheon and dinner on Thursday and Friday, will be held in the Assembly Room at Leamington

Town Hall, which has been placed at the disposal of the Convention organisers.

Application forms should be completed and returned as soon as possible to: The Secretary, 10 Chesterfield

Street, London, W.1.

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A se, CONVENTION APPLICATION FORM (2)

#### **IMPORTANT**

The total number of delegates who can be accommodated in the Town Hall at Leamington Spa is limited to 300. Applications will be dealt with in strict order of receipt and in any case cannot be accepted after Wednesday, 12th September, 1956.

It is equally essential that intending delegates who require hotel accommodation in Leamington should make their reservations as soon as possible, as there is likely to be some demand. All reservations should be made direct with the hotels concerned, a list of which appears at the end of this announcement.

FOR OFFICIAL USE

MATERIALS HANDLING CONVENTION, 1956 — LEAMINGTON SPA Thursday, 27th September; Friday, 28th September; Saturday, 29th September  NAME OF COMPANY  ADDRESS											
NAME OF DELEGATE.	£5. 5. 0d.	£6. 6. 0d.			Choice of Prefer	of Visits.					
	Member	Non Member.		1.	2.	3.	4.				
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TOTAL No.	£ : :	£ : :		indicate	prefere	delegate. ince for e overle	four by				

A panel has been included in the application form for your preference, i.e., the first four firms you wish to visit. As far as possible, the first two selections will be fulfilled.

# MATERIALS HANDLING CONVENTION PROGRAMME

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		THE RESIDENCE OF STREET, STREE
Thursday, 27th September, 1956		realistical and the second second second
Up to 12.00 noon	-	Delegates foregather at Hotels.
12.30 p.m.	-	Luncheon at Town Hall.
2.00 p.m.	1-	Coaches depart for Factory Visits.
7.30 p.m.	11	Civic Reception in Town Hall.
8.00 p.m.	_	Dinner (lounge suits).
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		and the section of th
Friday, 28th September, 1956		
8.45 a.m.	_	Coaches depart for Factory Visits.
1.30 p.m.	_	Luncheon at Town Hall.
3.00 p.m.	_	"Materials Handling's Thorny Problems". A Paper by John Bright, of Joseph Jucas, Ltd., Birmingham, followed by discussion
4.30 p.m.		Discussion ends.
7.30 p.m.	_	Dinner (lounge suits) — followed by film show.
	1	Converses Services Associated to the Converse As
Saturday, 29th September, 1956		north a which has been a broad a read that the first security
10.00 a.m.	_	Materials Handling Forum. The Panel Members will be leading industrialists engaged on Materials Handling in the companies visited by delegates.
11.30 a.m.	-	Convention ends.

# LIST OF FIRMS

# Available for visits on Thursday afternoon and/or Friday morning (See application form on previous page.)

Code Letter	Firm	Nature of Production				
A.	Associated Portland Cement Manufacturers Ltd.	Cement Manufacturers				
В.	Birmingham Railway Carriage & Wagon Co. Ltd.					
C.	S. Bradford & Sons Ltd.	Bread Factory				
D.	Cadbury Brothers Ltd., Bourneville.	Chocolate & Cocoa Manufacturers				
E.	Courtaulds Limited, Coventry.					
F.	Evered & Co. Ltd.	Light Engineering and Assembly				
G. (1)	Fisher & Ludlow, Ltd. (Factory Visit).	Mechanical Handling Equipment				
G. (2)	Fisher & Ludlow, Ltd. (Conveyor Centre).	Mechanical Handling Equipment				
H.	G.E.C., Coventry.	Electrical Components				
I.	G.P.O., Birmingham.	1				
J.	M. Howlett & Co., Birmingham.	Light Engineering and Assembly				
K.	Humber Ltd.	Motor Manufacturers				
L.	Imperial Foundry Co.					
M.	Lockheed Hydraulic Brake Co. Ltd.					
N.	Joseph Lucas Ltd.	Electrical Accessories				
Ο.	Northern Aluminium Company Ltd.					
P.	I.C.I., Ltd., Witton.	-				
Q.	Josiah Parkes, Ltd.	Manufacturers of Locks and Brassfoundry				

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# MATERIALS HANDLING CONVENTION HOTEL ACCOMMODATION

Delegates are asked to make their own reservations directly with the hotels, and it is important to note that bookings should be made as quickly as possible. Accommodation can be obtained at the hotels listed below:-

Clarendon, The Parade, Leamington Spa (Phone 2308).

Crown Hotel \*\*\*, A. A., R.A.C., High Street, Learnington Spa (Phone 1721).

Manor House Hotel, Avenue Road, Leamington Spa (Phone 1302).

Marlborough Hotel, Holly Walk, Leamington Spa (Phone 2757).

Oaks Hotel, R.A.C., Warwick Place, Leamington Spa (Phone 8869).

Regent Hotel \*\*\*\*, The Parade, Leamington Spa (Phone 2757).

Spa Hotel \*\*\*, A. A., R.A.C., Holly Walk, Learnington Spa (Phone 656.)

#### IMPORTANT

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It is necessary to complete and return the official application form whether or not delegates are local residents.

## HALIFAX GRADUATE WEEKEND SCHOOL

The Halifax Graduate Section will be holding their 1956 Weekend School at the Craiglands Hotel, Ilkley. The school will open at 2 p.m. on Saturday, September 29th and close at 3 p.m. on Sunday, September 30th.

The theme of the school will be "Some Aspects of the Elements of Administration".

The school will use Case Studies to develop the various aspects chosen for discussion. It is envisaged that this approach will provide full opportunity for a free exchange of ideas.

The programme has been so arranged that time will be left free for members, if they desire, to enjoy the amenities of the hotel and the town of Ilkley.

The school fees will be 55/- per person. This includes single room accommodation and meals from afternoon tea on Saturday to lunch Sunday.

Applications should be forwarded as soon as possible to the address shown on the application form.

Members and their ladies and friends are cordially invited to attend, and suitable accommodation will be arranged if special mention is made of requirements on the application form.

## REGIONAL MEETING

### SOUTHERN REGION

A visit to Oxford Colleges, meeting at the Forum Restaurant at 12 noon.

## **SECTION MEETINGS**

Visitors Tickets may be obtained from Section Honorary Secretaries.

### AUGUST, 1956

### MIDLANDS REGION

Coventry Graduate Section

The Craven Arms, High Street, Coventry.

Douglas D. Davis Award. An award made for the three best Papers submitted by Students and Graduates of the Section.

# HALIFAX GRADUATE SECTION ANNUAL WEEKEND SCHOOL, 1956

To: Mr. M. W. Alderdice, A.M.I.Prod.E., Vapalux, Ltd., Queen's Road, Halifax.

I s	hall be	attending	the 1	Halifax	Grad	uate	Section	Weeke	nd S	chool	in	Septemb	er an	d should	l be	pleased	if you	
woul	d reserv	ve accomi	nodati	on for	me.	I sh	all be	travellin	g by			and	will a	rrive at	Crai	glands I	Hotel at	
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# PRODUCTION APPOINTMENTS

BULLETIN No. 35 AUGUST 1956

The last date for receiving material for insertion in the following month's bulletin is the 20th of each month. The fee for insertion of particulars regarding each appointment is £3 3s. (up to 100 words), and over 100 words £5 5s. A standard charge of £1 1s. per insertion is made to firms affiliate to the Institution, Technical Colleges, Universities and similar organisations.

Advertisers are advised that better response is likely if, in addition to essential qualifications, the following information is given:—

(a) Location of appointment; (b) Status in the organisation and scope of promotion; (c) Salary range and age range. Advertisers are asked to advise the Institution when appointments are filled. The Institution reserves the right to refuse or withdraw any announcement and also to make any alteration in the wording to ensure conformity with the Institution standards. Members interested in the following appointments should make application in accordance with the terms of notice. No correspondence can be undertaken by the Secretary other than the forwarding of replies to Box Nos.

All advertisements appearing in this Bulletin are subject to the Notification of Vacancies Order of 1952.

Engineer required for duties on direct industrial training scheme operated by PERA. Must be capable of meeting executives and giving talks, lectures and demonstrations to production personnel, both at Melton Mowbray and at factories of member firms. Applicants should have had considerable experience of production methods in the engineering industry. Superannuation scheme. Application, stating age, experience, qualifications and salary required to: The Secretary, Production Engineering Research Association, Melton Mowbray, Leicestershire.

Designer, Laboratory apparatus works at Mitcham, Surrey. Age 25-30. Range wide in interest and variety. Write details of experience and salary required to: Technical Director, Griffin & George Limited, Ealing Road, Alperton, Wembley, Middlesex.

Production Engineer. A man between 25 and 35 years of age, who has served an engineering apprenticeship and preferably of G.C.E. standard, required in one of the manufacturing departments, (shortly to be moved to a new factory at Wythenshawe, Manchester). Applicants must have a knowledge of standard engineering processes, experience of office routine, and be able to compile and maintain running records. Tact in handling people is essential. Applicants must have the ambition to develop an organisation to control a growing department. This staff position offers excellent opportunities for promotion to the right man. Write for application form, quoting reference 'P.S.' to: Personnel Manager, Metropolitan-Vickers Electrical Co. Ltd., Trafford Park, Manchester, 17.

Estimator and Ratefixer required for toolroom in a well established engineering organisation engaged on large quantity production in the automobile industry. Applicants must have had a sound engineering training and be fully conversant with the production and maintenance of jigs, tools, fixtures and special equipment and, in particular, with the application of effective bonus schemes in regard to toolroom production. Excellent conditions; good remuneration; pension scheme. Housing accommodation available in the New Town for successful applicant. Write in the first instance to: Labour Manager, Alford & Alder (Engineers) Ltd., Maylands Avenue, Hemel Hempstead, Hertfordshire.

Young Man. We wish to bring into our organisation a young man who is keen to become ultimately a senior works executive. We are looking for a man aged about 25 who has technical training up to at least National Certificate level (a University degree would be an advantage) and has served an apprenticeship. This Company is engaged in the manufacture of gears and associated parts and the appointment will, for the first few months at least, be in London. Salary will be in the region of £600 -£800 depending on experience and background. Applicants interested in the above appointment should write, setting out full details of their past experience and achievements to: Box No. 1394, I.Prod.E., 10 Chesterfield Street, London, W.1.

Planning Engineers; Senior Planning Engineer; Plant Draughtsmen. Alford & Alder (Engineers) Ltd., Maylands Avenue, Hemel Hempstead, Hertfordshire, have the following vacancies:- Planning Engineers, aged 25 or over. Preferably experienced in process layout work for medium sized machining operations in large quantities. O.N.C. preferable but not essential. Senior Planning Engineer aged 28 years or over with at least five years' experience in process planning for mass production on modern machine tools, preferably with the automobile industry. Applicants should have O.N.C. as a minimum qualification. Must be capable of working entirely without supervision and able to prepare detailed estimates. Plant Draughtsmen, aged 24 or over. Preferably O.N.C. experienced in detail design involving some structural steel work and sheet metal work. Applicants should have had some experience in maintenance of plant and buildings. Housing accommodation available in the New Town within reasonable time for successful applicants. Good salary and conditions: pension scheme; sports club; canteen facilities. Write, giving age and full details of experience to: Labour Manager.

Timex Branch of U.S. Time Corporation (world's largest manufacturer of wrist-watches) require for their Dundee factories the following personnel:- Production Engineer. Experienced in initiating introduction of new projects in the field of precision instruments. Must possess sound knowledge of modern mass-production manufacturing, assembling and finishing techniques. Senior Tool Designer Draughtsman. Experienced in press tools, special-purpose equipment and other tooling associated with mass-production of small precision mechanisms. Technical qualifications for the above position H.N.C. or equivalent. These vacancies carry excellent remuneration with ample opportunities for promotion in a progressive company. The factories are located on the outskirts of the city in pleasant surroundings with scope for golf, rock-climbing, ski-ing, boating, fishing, etc. Apply, giving full details to: The Personnel Manager, Timex, Harrison Road, Dundee, Scotland.

'Hollerith' Design and Development Engineers. The continuing expansion of the Company offers excellent opportunities for senior engineers who are interested in the development and design of high speed electro-mechanical punched card accounting machines. Qualifications looked for include a recognised degree, Higher National Certificate, or equivalent standard, and previous shop and design experience, preferably in the electro-mechanical field. Facilities include pension fund, sick pay and further education arrangements. Applications or enquiries should be addressed to: The Personnel Superintendent, (Ref. PE/628), The British Tabulating Machine Co. Ltd., Icknield Way, Letchworth, Hertfordshire.

S.E. London — Senior Tool Designer; Senior Methods Engineer. An old established light engineering company engaged on precision machinery, assembly and sheet metal fabrication work requires a Senior Tool Designer and a Senior Methods Engineer. Considerable technical ability and initiative are essential and there are exceptional opportunities for advancements. Please write, giving full

details of age, qualifications and experience to: Box No. 1406, I.Prod.E., 10 Chesterfield Street, London, W.1.

Designers and Designer Draughtsmen. Kenwood Manufacturing Co. Ltd., of Woking, Surrey, have vacancies for Designers and Designer Draughtsmen for Production D/O and Development D/O. Required by progressive company manufacturing domestic electrical appliances. Interesting work on new projects. Responsible position, permanent and superannuated. Excellent prospects. Five-day week. Write, giving full details of previous experience and salary required to: The Personnel Officer.

Work Study Engineer. A Work Study Engineer, aged about 25 years, is required by a progressive firm of Manufacturing Chemists in the West London area. Applicant should preferably have an engineering degree or equivalent and training in work measurement and method study techniques. Opportunities exist for investigation into a wide range of activities and practical experience in work study is essential. Five-day week, pension and profit participation schemes. Salary according to age and experience but not less than £750 per annum. Write, giving full details of qualifications, experience and age to: Box No. 1407, I.Prod.E., 10 Chesterfield Street, London, W.1.

Methods Engineers. Well-known large engineering Company, engaged in batch production of precision equipment and machines, requires several Methods Engineers at factories in the Birmingham area and in South Wales. Applications are invited from production engineers with experience of modern machine shop practice, and who are interested in production cost reduction. Posts will be permanent and pensionable. Good working conditions. Applications should give details of training and experience, and should state salary required. Apply to Box No. 1408, I.Prod.E., 10 Chesterfield Street, London, W.1.

Work Study Engineers. Progressive company requires experienced personnel for all aspects of work study. Work offers many interesting problems due to diverse products of the Company. Salary in accordance with experience. Posts pensionable. Offers considerable scope for further advancement. Five-day week. Applications, giving age, experience and present salary to: Personnel Manager, The Telegraph Construction and Maintenance Co. Ltd., Telcon Works, Greenwich, London, S.E.10.

Production and Development Engineers and Design Draughtsmen. The Glacier Metal Co. Ltd., a progressive Company with factories in London, Kilmarnock and Glasgow; and with Service Stations in London, Manchester and Glasgow, employing in all more than 3,000 people in its Production and Service Units, Foundries, Toolrooms, Works Engineers Department and Machine Tool Building Departments, requires Production and Development Engineers and Design Draughtsmen. Owing to the nature of our products it is necessary for us to design and manufacture our own production machinery. Interesting posts are avaliable for engineers who are progressive in their thoughts and who want to work on the design and development of new machinery, and the efficient use of machinery in the latest methods of manufacture. The problems we are faced with demand engineers who are well qualified, have good practical experience and who are wanting to be employed on work which will make full use of their engineering skill and knowledge. If you are an engineer with a Degree, Higher National Certificate or Ordinary National Certificate, and possess a good workshop knowledge then we would be pleased to arrange an interview and discuss these vacancies with you. Starting salary £900 -£1,000 per annum for qualified men. Apply: J. Horne, Personnel Officer, Glacier Metal Co. Ltd., Ealing Road, Wembley, Middlesex.

Senior Development Engineer, £1,200 - £1,500, to work on aluminium die cast centrifugal filters. Glacier Metal Co. Ltd., Europe's largest plain bearing manufacturer needs senior man for investigation of applications and development of new models for a new exclusive process of

centrifugal filtration. Outposted to subsidiary in Glasgow, the Senior Development Engineer must have capacity to carry on without continuous contact with home-base. Directly responsible to General Manager of Central Research Organisation; two subordinates. Responsible for own liaison with manufacturing and sales to achieve acceptable designs. First or Second Honours in Engineering or Physics; apprenticeship or similar practical experience. Age 27-40. Apply: Personnel Manager, Glacier Metal Co. Ltd., Ealing Road, Wembley, Middlesex.

Senior Production Engineer. A large expanding light engineering company in South-West London requires a Senior Production Engineer. Applications are invited from men with appropriate qualifications and the successful candidate must have first-class knowledge and experience of administration, jig and tool design, process planning, work study, and must be acquainted with the most up-to-date production methods and techniques associated with electro-mechanical and electronic engineering. This is an excellent opportunity for a man of real ability to subsequently assume executive responsibility. Applications will be treated with strictest confidence and should be addressed to: Box No. 1409, I.Prod.E., 10 Chesterfield Street, London, W.1.

Engineers. Chairman and Managing Director of leading thermal engineering Company invite applications in confidence from engineers having sound technical knowledge and experience in the field of industrial furnaces and equipment, heat transfer, etc. Applicants will be considered for positions in technical sales, design, research and development divisions. Salary fully commensurate with experience. Excellent and progressive opportunity afforded in the home and overseas markets for both senior and junior engineers. Box No. 1410, I.Prod.E., 10 Chesterfield Street, London, W.1.

Planning Engineer required by established light engineering company in Home Counties, for the planning of processes and manufacture of light current electrical products. Applicants should have at least O.N.C. (Mech., Elec. or Prod.) or equivalent and preferably have served an engineering apprenticeship. Knowledge of chemical plant, mechanical and electrically controlled handling, piece part manufacture and assembly would be an advantage. Commencing salary up to £900 per annum. Non-contributory pension and group life insurance schemes in operation. Accommodation available within a few weeks of engagement. Removal expenses paid. Please write relevant particulars quoting Ref. K.1. to: Box 4D, M2558, A. K. Advg., 212a Shaftesbury Avenue, London, W.C.2.

Time Study — Machine Shop Assembly Jig and Tool Draughtsmen. The expanding activities of the North British Locomotive Co. Ltd., Diesel Engine Division, promote vacancies for production engineering personnel and technicians. There are prospects for advancement for the following vacancies: Time Study — Machine Shop Assembly Jig and Tool Draughtsmen. Young men with ambition and the capacity for responsibility are particularly welcomed for interview. Apply, in writing, to: (I.E.G.) Personnel Manager, North British Locomotive Co. Ltd., Springburn, Glasgow, N.1.

Central Electricity Authority, South Eastern Division—Second and Third Assistant Engineers. Applications are invited for the positions of Second and Third Assistant Engineers in the Generation Operation Department and the Operational Research Section at Divisional Headquarters, Kingston. The work will involve investigations and analysis of the performance of operating plant, methods of increasing plant availability and efficiency and the use of operational research in studying all aspects of divisional activity. Applicants should preferably be educated in an applied science (including engineering) and possess a keen analytical mind, enthusiasm and vision. Salary—Grade 2, £1,065 - £1,280 per annum; Grade 4, £850 10s. 0d. - £1,060 per annum. Applications, giving details of education, experience, posts held, etc., should be sent to: The

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Establishments Officer, Central Electricity House, Lower Ham Road, Kingston-on-Thames, so as to arrive by 9th August, 1956.

Central Electricity Authority, South Eastern Division—Senior Assistant Engineer. Applications are invited for the position of Senior Assistant Engineer in the Generation Economics and Methods Section of the Operation Department at Kingston. The successful applicant will be responsible for the investigation and analysis of plant performance, methods of increasing plant availability and efficiency and the development of new ideas and systems leading to the above items. Applicants should have been educated to H.N.C. standard and have energetic enthusiasm, organising ability and an enquiring mind. Salary—£1,220-£1,435 per annum. Applications, giving details of education, experience, posts held, etc., should be sent to: The Establishments Officer, Central Electricity House, Lower Ham Road, Kingston-on-Thames, so as to arrive by 9th August, 1956.

Assistant Chief Jig and Tool Draughtsman. Blackburn & General Aircraft Ltd., Brough, East Yorkshire, require an Assistant Chief for their Aircraft Tool Design Office. Applications are invited from suitably qualified men who have recent experience in the design of sub-assembly and assembly jigs and fixtures for modern high speed aircraft. The position presents an excellent opportunity for the man with the right experience. Good salary will be paid, with contributory pension and free life assurance benefits. Written applications, giving age, experience and qualifications, in the first instance to: The Personnel Manager at the above address. Mark envelope—"Jig and Tool". Those applicants called for interview will have their travelling expenses refunded.

Press Shop Manager. Required urgently, Press Shop Manager for large engineering works producing pressings for the motor industry. The post carries responsibility for a large department containing hydraulic and mechanical presses, varying from 2,000 tons to 60 tons capacity. Management experience essential. The salary will be between £900 and £1,200 according to experience. Apply to: The Company Secretary, John Thompson Motor Pressings Ltd., Beacon Works, Ettingshall, Wolverhampton.

Production Engineer required as Departmental Manager of heavy frame department in a large engineering company, producing side members for commercial vehicles. The appointment carries a high degree of responsibility and prospects of promotion. Management experience is an essential, and the ability to plan and organise production lines. Salary range £850-£1,100 per annum, according to experience. Apply to: The Company Secretary, John Thompson Motor Pressings Ltd., Beacon Works, Ettingshall, Wolverhampton.

Planning Engineer. A young and energetic Planning Engineer with production control experience for special duties and no departmental responsibilities. To be directly responsible to the General Manager of a Company manufacturing commercial vehicles. Details in chronological order of apprenticeship and subsequent experience. Superannuation scheme. Salary £1,000 per annum. Box No. 1411, I.Prod.E., 10 Chesterfield Street, London, W.1.

Production Development Engineer. Rotol Limited, Gloucester, announce a vacancy for a Production Development Engineer to take charge of a small section under the Production Engineer, for investigating new designs of undercarriages, gearboxes, propellers and hydraulic units, with a view to recommending alterations in design to facilitate manufacture. Applicants should have a sound engineering training and experience with a background of production engineering and design work. This is a senior appointment and carries monthly staff status. Applications should be addressed to: The Personnel Manager, Rotol Limited, Cheltenham Road, Gloucester.

Young Man. We wish to bring into our organisation a young man aged between 25-35 to run a Progress Department with a view to early promotion to Assistant Works Manager and subsequently Works Manager. Must have served an apprenticeship and although a university degree is desirable it is not essential. We are engaged in the rolling of steel and the manufacture of vehicle springs, in the Rotherham (Sheffield) area. Salary according to ability and qualifications to; Box No. 1412, I.Prod.E., 10 Chesterfield Street, London, W.1.

H.M. Inspectors of Factories (Class II). Ministry of Labour and National Service: H.M. Inspectors of Factories (Class II). The Civil Service Commissioners invite applications from men and women for pensionable posts. Age at least 21 and (unless exceptionally well qualified) under 30 on 1st June in the year of application with extension for regular service in H.M. Forces. London salary (including extra duty allowance where payable) £533 (at age 21), then according to age up to £708 at 26 or over, rising to £969 (somewhat lower outside London). A special increment of £25, within the scale, is granted after passing probation. Higher posts filled by promotion from Class II. Pay and conditions of service are under review. Duties include the enforcement of the provisions of the Factories Acts and Regulations affecting the safety, health and welfare of work-people and extend to all manufacturing industries and to certain other places, including docks, works of engineering construction and building operations. Candidates must normally be university graduates, preferably in Engineering or Natural Science (or comparable technical qualification, e.g., A.M.I.Mech.E.). Graduates in other subjects, including Arts, are eligible. Works or other practical experience an advantage. Candidates without degrees (or comparable technical qualifications, and have had considerable works or other practical experience (especially in responsible positions) will also be considered. Application may be made at any time, and so long as there are vacancies suitable candidates will be interviewed. Particulars from: Secretary, Civil Service Commission, 6 Burlington Gardens, London, W.1, quoting No. 280.

Engineers. Applications are invited from Engineers for work on research and development of automation techniques and production processes for the engineering industry. Previous experience not essential. Candidates should have an engineering or science degree, Higher National Certificate or equivalent qualification. Send full details, including age, qualifications, experience and present salary in confidence to: Box No. 1413, I.Prod.E., 10 Chesterfield Street, London, W.1.

Works Manager, age 32-44, to take complete charge under Managing Director of progressive modern works (40 employees) in Wolverhampton making control gear and quality precision electro-mechanical products. Applicants must be apprenticeship served qualified electrical engineers with practical experience of supervision, production planning and work study. Works comprise D.O., Tool Room, Sheet Metal, Paint, Assembly, Wiring and Test Departments. First-class man who can become General Manager in two to three years time sought. Commence £1,000, plus bonus on output. Full details of training, positions held and salaries earned, in writing to: Box No. 1414, I.Prod.E., 10 Chesterfield Street, London, W.1.

Graduates. Production Engineering Research Association requires Graduates (or equivalent) in engineering, physics and metallurgy for fundamental and practical research on machining and forming of metals, friction and lubrication of machine slideways, vibration of machine tools, etc. Previous experience not essential; good prospects of advancement. Status and commencing salary will depend on age, qualifications and experience. Superannuation under F.S.S.U. Applications welcomed from graduates completing National Service this year. Send full details to: R. 316, PERA, Melton Mowbray, Leicestershire.

Jig and Tool Draughtsmen; Planning Engineers; Tool Estimators. Production engineering staff required by The Rheostatic Co. Ltd., of Slough. Continued expansion has created vacancies for Jig and Tool Draughtsmen, Planning Engineers and Tool Estimators, having sound practical experience of light engineering. Permanent pensionable posts offering good prospects. Apply: The Personnel Manager, The Rheostatic Company Ltd., Farnham Road, Slough, Bucks.

Works Manager for South Wales engineering company fabricating light steel products. Applicants should have had experience in work study, production planning for batch production, simple press work and welding. Apply, giving details of experience and salary required to: Box D535, c/o R. F. White & Son Ltd., 72 Fleet Street, London, E.C.4.

Works Manager. Management Selection Limited have been retained to advise on the selection of a Works Manager for a light engineering firm in the Birmingham area. The Company is old established, but the factory (120,000 sq. ft.) is new; production is mainly large batch with some ancillary rubber production. Product range and volume are expanding; a man with the necessary capacity would have early prospects of wider scope in general management due to a retirement. Candidates should have an engineering qualification, and experience of production management and production engineering in a similar industry. Probable age 35-45. Starting salary about £1,750-£2,000. Management Selection Limited would be glad to have brief details from candidates meeting these requirements. No information will be passed to our clients without candidate's permission at interview. Please write in confidence to: R. A. Denerley, Management Selection Limited, (H.130), 8 Clarges Street, London, W.1.

Engineer. Rootes Group, Export Division, London, require Engineer, 30-40 years of age, experienced in motor vehicle manufacture and assembly. Appointment embraces duties in connection with production planning; factory layout; equipment purchase and the commercial aspects of overseas production. Attractive salary, working conditions and pension are offered and there is opportunity for advancement and travel. Applications, treated confidentially, including details and photograph to: Secretary, Rootes Ltd., Devonshire House, Piccadilly, London, W.1.

Planning Engineer required capable of working on own initiative. Excellent opportunity for keen man with good engineering background. Write, stating age, experience and present salary to: The Trent Engineering Co. Ltd., Wilford Crescent, Nottingham.

Production and Methods Engineers. Rank Precision Industries Ltd., is a group of Companies manufacturing high quality precision, mechanical, optical and electronic equipment, including sound recording equipment for the cinematograph and television industries, as well as specialised measuring instruments, radiation instruments and machine tools for industry in general. The four main factories of Rank Precision Industries Ltd., are situated in Shepherds Bush (London), Mitcheldean (Glos.), Leicester and Leeds. Experienced Production and Methods Engineers are required at all four factories. Several senior appointments now vacant. Junior posts are also available for young men of good education. All positions are pensionable. Please apply, giving age, experience and salary required to: The Group Production Engineer, Rank Precision Industries Ltd., Woodger Road, Shepherds Bush, London, W.12.

Designer for press tools and sheet metal developments in stainless steel light gauges. Must be experienced and capable of originating design of tools for new products and supervising their completion. Age 30-40. The plant includes 20, 100, 200 and 350 ton deep drawing presses, mechanical and hydraulic, and offers interesting prospects to the suitable candidate. Please write, giving education and training, experience and salary. W. & G. Sissons Limited, Saint Mary's Road, Sheffield, 2.

Production Engineer — Estimator required by a well-established and progressive company of tool makers and precision engineers. Applicants must be thoroughly experienced and have a sound technical knowledge in the preparation of operation layouts, shop loading, up-to-date production methods and techniques and the preparation of estimates for quotation. The company's activities cover the manufacture of special purpose machines, tool making for the plastic trade, press tools, jigs and fixtures and general precision engineering. This is a well paid progressive appointment for the man with the right experience and it provides opportunity for advancement to a good production engineer. Assistance will be given if required in nomination for housing. Modern well-equipped factory in pleasant surroundings near Cardiff. Replies, giving full chronological details of practical experience and technical knowledge, will be treated in strictest confidence. All replies will be acknowledged and expenses paid in connection with all interviews. Box No. 1415, I.Prod.E., 10 Chesterfield Street, London, W.1.

Production Planner required by well-known metal sign manufacturers. First-class administrative ability. Knowledge of the sign trade not so essential as a complete knowledge of light metal fabrications. Executive appointment. Permanency. Salary in the range £800 - £900 per annum as a commencement and according to experience. Written applications only to be sent in confidence to: Mr. L. Long, Company Secretary, N. L. Cowling (Charlton) Ltd., Armstrong Gardens, Woolwich Road, London, S.E.7.

Engineers with a mind to planning. If you have experience in machine shop planning for gas turbines or similar machines; if you have served a recognised apprenticeship; and if you have general workshop experience, especially on jig and tool design . . . then Bristol Aero-Engines Limited would like to see you working in their London tool design office as a process planning engineer. The money will run according to the value of your experience and the prospects of promotion are excellent for anyone who shows drive and initiative. Interested? Then write, giving experience, present salary and preferred time for interview to: Bristol Aero-Engines Limited, Department ED/83/JPS, Blenstock House, Blenheim Street, London, W.1.

Work Study Engineer and Time Study Engineer. Major modernisation and expansion plans of The North British Rubber Company now being undertaken in conjunction with a leading American rubber manufacturer involve new and improved materials, products and processes; exceptional opportunities are offered for a Work Study Engineer, aged 27-35 years; the work entails the detailed develop-ment of an extensive factory modernisation programme, with particular reference to improved equipment, pro-cessing, methods and effective labour utilisation; the position also requires an appreciation of all factors influencing production operating efficiency; applicants who should have a degree qualification in engineering or science with several years work study experience will be offered competitive salaries. There is also a vacancy for a Time Study Engineer who is required to revise labour standards and bonus schemes, in connection with the modernisation programme; the job also involves the introduction of new standards for additional products. The company has a comprehensive personal policy operating in both the Edinburgh and Dumfries factories, including a staff superannuation scheme. Applications, giving details of qualifications, experience, present position and salary, should be addressed to: The Industrial Relations Division, Castle Mills, Edinburgh, and marked R.H.

Production Engineers. Three Production Engineers, age 23-30, required by a large company in the North Midlands area to form the nucleus of a new Production Engineering Department. Applicants should have a University Degree and experience of works study, application of incentive schemes and materials handling. The company is following a large expansion programme and there will be excellent opportunities for the right people. Salary will be commensurate with age and experience. Apply in strict

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confidence to: Chief Production Engineer, Box No. 1416, I.Prod.E., 10 Chesterfield Street, London, W.1.

Production Engineer. A large industrial group in the Midlands has a vacancy for a Production Engineer. Applications are invited from engineering graduates, age 28-40, who have had extensive experience in modern management techniques, preferably with a firm of industrial consultants. This is a senior position and the salary will be in the range of £1,500-£2,500 per annum depending on qualifications. To be successful a candidate must be of a calibre to assume senior executive responsibility within two years. Write in confidence, stating age and giving a brief summary of experience. Box No. 1417, I.Prod.E., 10 Chesterfield Street, London, W.1.

Work Study Engineer required. Permanent job. Should become Chief of the Group after 12-18 months. Big job of work to be done. High commencing salary and bonus on results. North of Birmingham. Please send details to: Box No. 1418, I.Prod.E., 10 Chesterfield Street, London, W.1.

Toolmaking and Precision Engineering. Highly reputable and very well equipped trade toolmakers, situated 20 miles West of London and employing 60, invite applications for the following positions: Works Manager; Chief Inspector, A.I.D. Approved; Deputy Chief Inspector; Estimating and Planning Engineer. These key positions carry ample remuneration and no age restrictions. Assistance with housing may be available. Please write full details, stating present salary to: Box No. 1419, I.Prod.E., 10 Chesterfield Street, London, W.I.

Methods Engineers required for a Group of Engineering Companies situated in the North Midlands. Applicant must have had previous experience in this class of work. Opportunities exist for advancement. Assistance is offered in respect of housing and a pension scheme is in operation. Box No. 1420, I.Prod.E., 10 Chesterfield Street, London, W.1.

Work Study Engineers. Progressive company requires experienced personnel for all aspects of work study. Work offers many interesting problems due to diverse products of the company. Salary in accordance with experience. Posts pensionable. Offers considerable scope for further advancement. Five-day week. Applications, giving age, experience and present salary to: Personnel Manager, The Telegraph Construction and Maintenance Co. Ltd., Telcon Works, Greenwich, London, S.E.10.

Bristol College of Technology, Unity Street, Bristol, 1.

Lecturer and Grade B Assistants. Applications invited for following posts avaliable from 1st September next:

(a) Lecturer to teach Strength of Materials in National Certificate and National Diploma Courses. Ability to teach Theory of Structures and/or other Mechanical or Aeronautical Engineering subjects an advantage. (b) Grade B Assistants (2) to teach Mechanical or Aeronautical Engineering subjects in National Certificate and National Diploma Courses. (c) Grade B Assistant to teach Mathematics in Mechanical and Electrical National Certificate and National Diploma Courses. (d) Grade B Assistants (2) to teach Technology, Practice and ancillary subjects in at least one of the following: (i) City and Guilds Machine Shop Engineering; (ii) Press and Sheet Metal Work; (iii) Welding, Gas and Electric; (iv) Patternmaking and Foundry work. To a suitably qualified person more advanced work in Higher National Production Courses will be available. Burnham Technical Scale salaries for all posts at present as follows: Lecturer—£965 × £25 to £1,065 per annum. Grade B Assistants—£450 × £18 to £725 per annum. Grade B Assistants—£450 × £18 to confirmation the following are recommended from 1st October next: Lecturer—£1,200 × £30 to £1,350 per annum. Grade B Assistants—£455 × £25 to £1,025 per annum. Grade B Assistants—£475 × £25 to £1,025 per annum. Grade B Assistants—£475 × £25 to £1,025 per annum. Grade A Assistants receive additions for

degree and training and increments for approved industrial experience. Application forms and further particulars from: Registrar, College of Technology, Unity Street, Bristol, 1.

South East London Technical College, Lewisham Way, London, S.E.4.
Applications are invited for the following posts:
(i) Two Lecturers for either Applied Mechanics or Machine Tools and Metrology and allied subjects for Higher National Certificates in Mechanical or Production Engineering; should be graduates of British University and preferably also corporate members of the Institution of Mechanical or Production Engineers. (ii) Two Assistants, Grade B, for general mechanical engineering subjects selected from Mathematics, Applied Mechanics, Engineering Drawing and Design, Workshop Technology and Heat Engines. (iii) Grade B for Electrical Engineering and allied subjects to H.N.C. and I.E.E. Part III standard. Should be graduate of British University, preferably with industrial and teaching experience. Salaries as proposed by Burnham (F.E.) Committee: (i) £1,236 × £30 to £1,398. (ii) and (iii) £686 × £25 to £1,073. Additions separately for graduate status, training and approved honours degree, to maximum of £200. Commencing and maximum salaries according to age, qualifications and experience. Application forms from: Secretary at College, Lewisham Way, London, S.E.4, to be returned as soon as possible. (1265.)

Mid-Warwickshire College of Further Education, Warwick New Road, Leamington Spa. Assistant Grade B. Applications are invited for an Assistant Grade B in the Engineering Department from September or as soon thereafter as possible. Applicants should be able to teach up to O.N.C. level and to City and Guilds Final level in Workshop Technology and Practice. Courses leading to H.N.C. may well develop. The post may involve responsibility for the Engineering Workshop which is well equipped with modern machine tools. Salary in accordance with the Burnham Technical Report which is at present under review. The scale may be £650 × £25 to £1,025 from October, 1956. Commencing salary will be dependent on qualifications, teaching service and/or industrial experience. Further details and forms of application from: The Principal, at the address quoted above.

Kingston Technical College, Fassett Road, Kingston-on-Thames. Assistant Lecturer Grade B in Mechanical Engineering. Applications are invited for the post of Assistant Lecturer Grade B in Mechanical Engineering, preferably with Production Engineering bias, to commence Septémber. Candidates should be graduates or have appropriate professional qualifications. Salary (subject to revision from 1st October, 1956) — £525 × £25 to £820 per annum, plus London Allowance, with additional allowances for graduate qualifications, approved training and experience. Particulars and application form from Principal, on receipt of stamped addresed envelope.

College of Technology and Commerce, Cardiff.
Engineering Department. Applications are invited for the following posts: Senior Lecturer in Mechanical Engineering, to be responsible for the teaching and the laboratory in Theory of Machines and Applied Mechanics. A graduate with professional qualification and teaching experience is required. Salary —£1,350 × £50 to £1,550 per annum. Lecturer in Production Engineering, to share in the development of advanced Machine Tools and Metrology laboratories and capable of teaching Metrology or Jig and Tool Design to graduate standard. An experienced production engineer with professional qualification is required. Salary —£1,200 × £30 to £1,350 per annum. Lecturer in Mechanical Engineering, with special responsibility for Engineering Drawing and Design. Applicants should be experienced in the presentation of designs and hold a degree or professional qualification. They should be capable of directing students' individual design projects in the final year of new professional courses. Salary —£1,200 × £30 to £1,350 per annum. Assistant Lecturer, Grade B, to share in the

teaching of some of the following subjects: Applied Mechanics, Theory of Machines, Heat Engines, Strength of Materials, Engineering Drawing. A young graduate with suitable industrial experience would be preferred. Salary—£650 × £25 to £1,025 per annum, plus training and graduate additions which can raise the scale by £200 at the minimum and maximum. Starting salary depends on age and experience. Assistant Lecturer, Grade B, to share in the teaching of some of the following subjects: Applied Mechanics, Workshop Technology, Metallurgy, Workshop Practice, Engineering Drawing. A young man holding a degree or professional qualification and having had appropriate industrial experience, would be preferred. Salary—£650 × £25 to £1,025 per annum, plus training and graduate additions which can raise the scale by £200 at the minimum and maximum. Starting salary depends on age and experience. Further particulars and forms of application may be obtained from: Mr. R. E. Presswood, Director of Education, City Hall, Cardiff, on receipt of a stamped addressed foolscap envelope. Applications should be returned as soon as possible.

The College of Aeronautics, Cranfield, Bletchley, Bucks. Work Study School, Cranfield. Applications are invited for an appointment in October, 1956, to the lecturing staff of the Work Study School, from candidates with sound experience in the application of modern work study techniques in industry. Candidates should be graduates or of suitable professional standing and preference will be given to those with experience in lecturing on technical subjects.

The salary on appointment, depending on experience and qualifications, will be within the scale of either £850  $\times$  £50 to £1,200 or £1,200  $\times$  £50 to £1,600; if the appointment is made in the lower grade opportunity will exist for advancement to the higher grade. The appointment carries superannuation under the F.S.S.U., and family allowance. The School is residential; there is the possibility of a small house for a married man. Applications should be addressed to: The Recorder, The College of Aeronautics, Cranfield, Bletchley, Bucks., from whom further particulars may be obtained.

Rotherham Technical College.
Department of Mechanical, Production and Civil Engineering. Applications are invited from suitably qualified persons for the post of Lecturer in Production Engineering to teach to Higher National Certificate standard in at least two of the following subjects: Metrology, Machine Tools, Workshop Technology, Jig and Tool Design. Candidates should have had appropriate industrial and teaching experience. Salary will be in accordance with the Burnham Technical Report which at present is £965 × £25 to £1,065, but it is expected that from the 1st October, 1956, the following new scale will be in operation: £1,200 × £30 to £1,350. Application forms and particulars may be obtained from: R. Bloomer, Director of Education, Education Offices, Rotherham, to whom they should be returned within 14 days of the appearance of this advertisement.

